

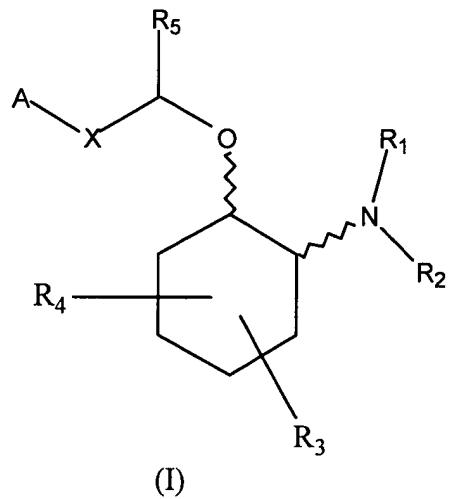
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-159. (Canceled)

160. (New) A compound of formula (I), or a solvate or pharmaceutically acceptable salt thereof:



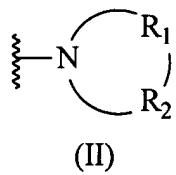
wherein, independently at each occurrence,

X is selected from $-\text{C}(\text{R}_6, \text{R}_{14})-\text{Y}-$, and $-\text{C}(\text{R}_{13})=\text{CH}-$;

Y is selected from a direct bond, O, S, and $\text{C}_1\text{-C}_4$ alkylene;

R_{13} is selected from hydrogen, $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_3\text{-C}_8$ cycloalkyl, aryl, and benzyl;

R_1 and R_2 , when taken together with the nitrogen atom to which they are directly attached in formula (I), form a ring denoted by formula (II):



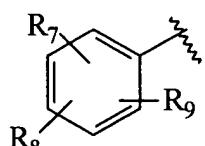
wherein the ring of formula (II) is formed from the nitrogen as shown as well as three to nine additional ring atoms independently selected from carbon, nitrogen, oxygen, and sulfur; where any two adjacent ring atoms may be joined together by single or double bonds, and where any one or more of the additional carbon ring atoms may be substituted with one or two substituents selected from hydrogen, hydroxy, C₁-C₃hydroxyalkyl, oxo, C₂-C₄acyl, C₁-C₃alkyl, C₂-C₄alkylcarboxy, C₁-C₃alkoxy, C₁-C₂₀alkanoyloxy, or may be substituted to form a spiro five- or six-membered heterocyclic ring containing one or two heteroatoms selected from oxygen and sulfur; and any two adjacent additional carbon ring atoms may be fused to a C₃-C₈carbocyclic ring, and any one or more of the additional nitrogen ring atoms may be substituted with substituents selected from hydrogen, C₁-C₆alkyl, C₂-C₄acyl, C₂-C₄hydroxyalkyl and C₃-C₈alkoxyalkyl; or

R₁ and R₂, when taken together with the nitrogen atom to which they are directly attached in formula (I), may form a bicyclic ring system selected from 3-azabicyclo[3.2.2]nonan-3-yl, 2-azabicyclo[2.2.2]octan-2-yl, 3-azabicyclo[3.1.0]hexan-3-yl, and 3-azabicyclo[3.2.0]heptan-3-yl;

R₃ and R₄ are independently attached to the cyclohexane ring shown in formula (I) at the 3-, 4-, 5- or 6- positions and are independently selected from hydrogen, hydroxy, C₁-C₆alkyl, and C₁-C₆alkoxy;

R₅, R₆ and R₁₄ are independently selected from hydrogen, C₁-C₆alkyl, aryl and benzyl;

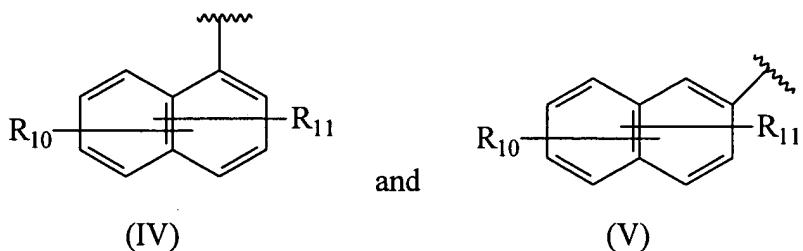
A is selected from C₅-C₁₂alkyl, a C₃-C₁₃carbocyclic ring, and ring systems selected from formulae (III), (IV), (V), (VI), (VII) and (VIII):



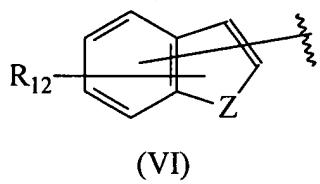
(III)

where R₇, R₈ and R₉ are independently selected from bromine, chlorine, fluorine, carboxy, hydrogen, hydroxy, hydroxymethyl, methanesulfonamido, nitro, sulfamyl, trifluoromethyl,

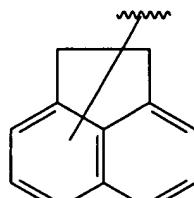
C_2 - C_7 alkanoyloxy, C_1 - C_6 alkyl, C_1 - C_6 alkoxy, C_2 - C_7 alkoxycarbonyl, C_1 - C_6 thioalkyl and $N(R_{15},R_{16})$ where R_{15} and R_{16} are independently selected from hydrogen, acetyl, methanesulfonyl, and C_1 - C_6 alkyl;



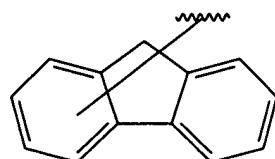
where R_{10} and R_{11} are independently selected from bromine, chlorine, fluorine, carboxy, hydrogen, hydroxy, hydroxymethyl, methanesulfonamido, nitro, sulfamyl, trifluoromethyl, C_2 - C_7 alkanoyloxy, C_1 - C_6 alkyl, C_1 - C_6 alkoxy, C_2 - C_7 alkoxycarbonyl, C_1 - C_6 thioalkyl, and $N(R_{15},R_{16})$ where R_{15} and R_{16} are independently selected from hydrogen, acetyl, methanesulfonyl, and C_1 - C_6 alkyl;



where R_{12} is selected from bromine, chlorine, fluorine, carboxy, hydrogen, hydroxy, hydroxymethyl, methanesulfonamido, nitro, sulfamyl, trifluoromethyl, C_2 - C_7 alkanoyloxy, C_1 - C_6 alkyl, C_1 - C_6 alkoxy, C_2 - C_7 alkoxycarbonyl, C_1 - C_6 thioalkyl, and $N(R_{15}, R_{16})$ where R_{15} and R_{16} are independently selected from hydrogen, acetyl, methanesulfonyl, and C_1 - C_6 alkyl; and Z is selected from CH , CH_2 , O , N and S , where Z may be directly bonded to "X" as shown in formula (I) when Z is CH or N , or Z may be directly bonded to R_{17} when Z is N , and R_{17} is selected from hydrogen, C_1 - C_6 alkyl, C_3 - C_8 cycloalkyl, aryl and benzyl;



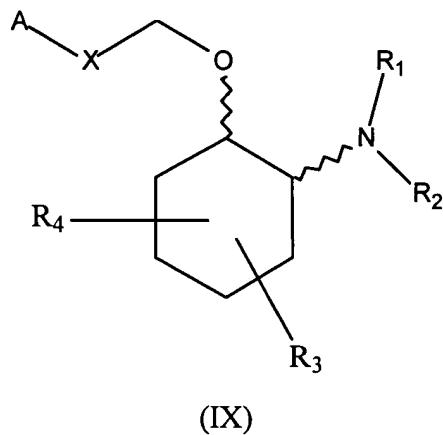
(VII)



(VIII)

including isolated enantiomeric, diastereomeric and geometric isomers thereof, and mixtures thereof.

161. (New) A compound according to claim 160 having formula (IX), or a solvate or pharmaceutically acceptable salt thereof:



(IX)

wherein, independently at each occurrence,

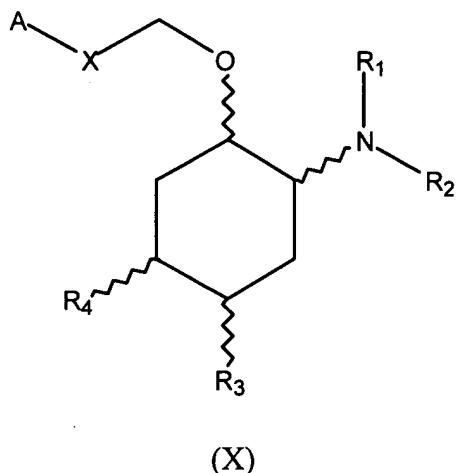
X is selected from -C(R₆,R₁₄)-Y-, and -C(R₁₃)=CH-;

Y is selected from a direct bond, O and S; and

R₁, R₂, R₃, R₄, R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂, R₁₄, A and Z are defined as in claim 160;

including isolated enantiomeric, diastereomeric and geometric isomers thereof, and mixtures thereof.

162. (New) A compound of claim 160 having formula (X), or a solvate or pharmaceutically acceptable salt thereof:



(X)

wherein, independently at each occurrence,

X is selected from $-\text{C}(\text{R}_6, \text{R}_{14})-\text{Y}-$, and $-\text{C}(\text{R}_{13})=\text{CH}-$;

Y is selected from a direct bond, O , and S ;

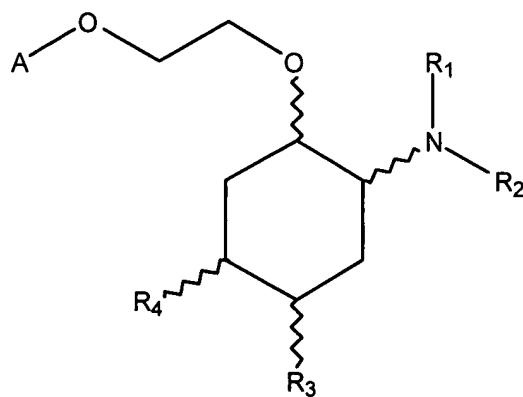
R_1 , R_2 , R_6 and R_{14} are defined as in claim 160;

R_3 and R_4 are independently selected from hydrogen and $\text{C}_1\text{-C}_6$ alkoxy; and

A is selected from $\text{C}_5\text{-C}_{12}$ alkyl, $\text{C}_3\text{-C}_8$ cycloalkyl, and any of formulae (III), (IV), (V), and (VI) as defined in claim 160, wherein Z , R_7 , R_8 , R_9 , R_{10} , R_{11} and R_{12} are defined as in claim 160;

including isolated enantiomeric, diastereomeric and geometric isomers thereof, and mixtures thereof.

163. (New) A compound of claim 160 having formula (XI), or a solvate or pharmaceutically acceptable salt thereof:



(XI)

wherein, independently at each occurrence,

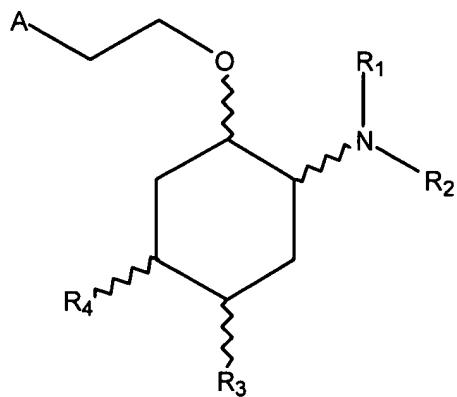
R₁ and R₂ are defined as in claim 160;

R₃ and R₄ are independently selected from hydrogen and methoxy; and

A is selected from C₅-C₁₂alkyl, C₃-C₈cycloalkyl, and any of formulae (III), (IV), (V), and (VI) as defined in claim 160, wherein Z, R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂ are defined as in claim 160;

including isolated enantiomeric, diastereomeric and geometric isomers thereof, and mixtures thereof.

164. (New) A compound of claim 160 having formula (XII), or a solvate or pharmaceutically acceptable salt thereof:



(XII)

wherein, independently at each occurrence,

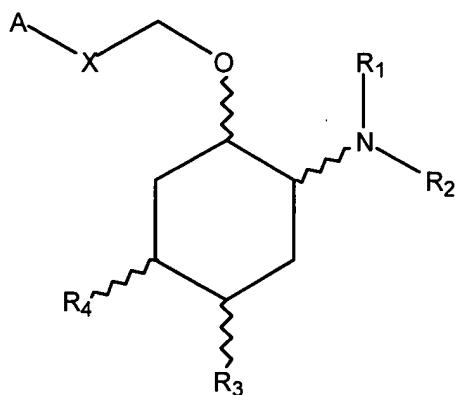
R₁ and R₂ are defined as in claim 160;

R₃ and R₄ are independently selected from hydrogen and methoxy; and

A is selected from C₅-C₁₂alkyl, C₃-C₈cycloalkyl, and any of formulae (III), (IV), (V) and (VI) as defined in claim 160, wherein Z, R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂ are defined as in claim 160;

including isolated enantiomeric, diastereomeric and geometric isomers thereof, and mixtures thereof.

165. (New) A compound of claim 160 having formula (XIII), or a solvate or pharmaceutically acceptable salt thereof:



(XIII)

wherein, independently at each occurrence,

X is selected from $-\text{C}(\text{R}_6, \text{R}_{14})\text{Y}-$ and $-\text{CH}=\text{CH}-$;

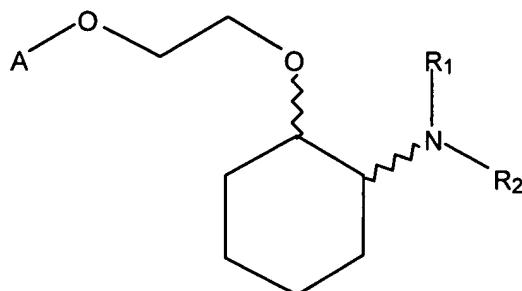
Y, R₁, R₂, R₆ and R₁₄ are defined as in claim 160;

R₃ and R₄ are independently selected from hydrogen and methoxy; and

A is selected from C₃-C₈cycloalkyl and any of formulae (III), (IV), (V), (VI), (VII) and (VIII) as defined in claim 160, where R₈ and R₉ are defined as in claim 49, R₇, R₁₀, R₁₁ and R₁₂ are hydrogen, and Z is selected from O, S and N-R₁₇ where R₁₇ is selected from hydrogen and methyl;

including isolated enantiomeric, diastereomeric and geometric isomers thereof, and mixtures thereof.

166. (New) A compound of claim 160 having formula (XIV), or a solvate or pharmaceutically acceptable salt thereof:



(XIV)

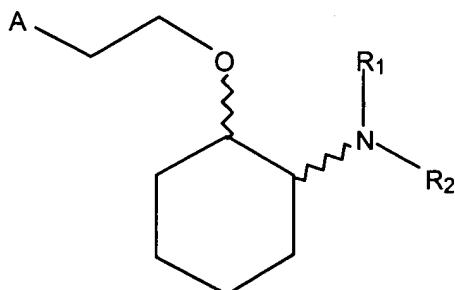
wherein, independently at each occurrence,

R₁ and R₂ are defined as in claim 160; and

A is selected from any of formulae (III), (IV), (V) and (VI) as defined in claim 160, wherein R₇, R₁₀, R₁₁ and R₁₂ are hydrogen, R₈ and R₉ are independently selected from hydrogen, hydroxy, fluorine, chlorine, bromine, methanesulfonamido, methanoyloxy, methoxycarbonyl, nitro, sulfamyl, thiomethyl, trifluoromethyl, methyl, ethyl, methoxy, ethoxy and NH₂; and Z is selected from O and S;

including isolated enantiomeric, diastereomeric and geometric isomers thereof, and mixtures thereof.

167. (New) A compound of claim 160 having formula (XV), or a solvate or pharmaceutically acceptable salt thereof:



(XV)

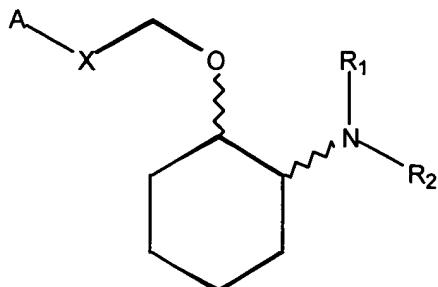
wherein, independently at each occurrence,

R₁ and R₂ are defined as in claim 160; and

A is selected from any of formulae (III), (IV), (V) and (VI) as defined in claim 160, wherein R₇, R₁₀, R₁₁ and R₁₂ are hydrogen, R₈ and R₉ are independently selected from hydrogen, hydroxy, fluorine, chlorine, bromine, methanesulfonamido, methanoyloxy, methoxycarbonyl, nitro, sulfamyl, thiomethyl, trifluoromethyl, methyl, ethyl, methoxy, ethoxy and NH₂; and Z is selected from O and S;

including isolated enantiomeric, diastereomeric and geometric isomers thereof, and mixtures thereof.

168. (New) A compound of claim 160 having formula (XVI), or a solvate or pharmaceutically acceptable salt thereof:



(XVI)

wherein, independently at each occurrence,

X is selected from *trans*-CH=CH-, -CH₂- and -CH₂-O-;

R₁ and R₂ taken together with the nitrogen atom to which they are attached form a ring selected from pyrrolidinyl, 2-ketopyrrolidinyl, 3-ketopyrrolidinyl, 2-acetoxypyrrolidinyl, 3-acetoxypyrrolidinyl, 2-hydroxypyrrolidinyl, 3-hydroxypyrrolidinyl, thiazolidinyl, piperidinyl, 2-ketopiperidinyl, 3-ketopiperidinyl, 4-ketopiperidinyl, acetyl piperazinyl, 1,4-dioxa-7-azaspiro[4.4]non-7-yl, hexahydroazepinyl, morpholinyl, N-methylpiperazinyl and 3-azabicyclo[3.2.2]nonanyl; and

A is selected from cyclohexyl, monochlorophenyl, 2,6-dichlorophenyl, 3,4-dichlorophenyl, 2-bromophenyl, 2,4-dibromophenyl, 3-bromophenyl, 4-bromophenyl, 3,4-dimethoxyphenyl, 1-naphthyl, 2-naphthyl, 3-benzo(b)thiophenyl, 4-benzo(b)thiophenyl, (2-trifluoromethyl)phenyl, 2,4-di(trifluoromethyl)phenyl, and (4-trifluoromethyl)phenyl;

including isolated enantiomeric, diastereomeric and geometric isomers thereof, and mixtures thereof.

169. (New) A compound, or mixture comprising compounds, selected from the group consisting of:

(+)-*trans*-[2-(4-morpholinyl)-1-(2-naphthenethoxy)]cyclohexane;

(-)-*trans*-[2-(4-morpholinyl)-1-(2-naphthenethoxy)]cyclohexane;

(+)-*trans*-[2-(4-morpholinyl)-1-(1-naphthenethoxy)]cyclohexane;

(-)-*trans*-[2-(4-morpholinyl)-1-(1-naphthenethoxy)]cyclohexane;

(+)-*trans*-[2-(4-morpholinyl)-1-(4-bromophenethoxy)]cyclohexane;

(*-*)-*trans*-[2-(4-morpholinyl)-1-(4-bromophenethoxy)]cyclohexane;
(*+*)-*trans*-[2-(4-morpholinyl)-1-[2-(2-naphthoxy)ethoxy]]cyclohexane;
(*-*)-*trans*-[2-(4-morpholinyl)-1-[2-(2-naphthoxy)ethoxy]]cyclohexane;
(*+*)-*trans*-[2-(4-morpholinyl)-1-[2-(4-bromophenoxy)ethoxy]]cyclohexane;
(*-*)-*trans*-[2-(4-morpholinyl)-1-[2-(4-bromophenoxy)ethoxy]]cyclohexane;
(*+*)-*trans*-[2-(4-morpholinyl)-1-(3,4-dimethoxyphenethoxy)]cyclohexane;
(*-*)-*trans*-[2-(4-morpholinyl)-1-(3,4-dimethoxyphenethoxy)]cyclohexane;
(*+*)-*trans*-[2-(1-pyrrolidinyl)-1-(1-naphthenethoxy)]cyclohexane;
(*-*)-*trans*-[2-(1-pyrrolidinyl)-1-(1-naphthenethoxy)]cyclohexane;
(*+*)-*trans*-[2-(4-morpholinyl)-1-(2-(benzo[b]thiophen-3-yl)ethoxy)]cyclohexane;
(*-*)-*trans*-[2-(4-morpholinyl)-1-(2-(benzo[b]thiophen-3-yl)ethoxy)]cyclohexane;
(*+*)-*trans*-[2-(4-morpholinyl)-1-(2-(benzo[b]thiophen-4-yl)ethoxy)]cyclohexane;
(*-*)-*trans*-[2-(4-morpholinyl)-1-(2-(benzo[b]thiophen-4-yl)ethoxy)]cyclohexane;
(*+*)-*trans*-[2-(4-morpholinyl)-1-(3-bromophenethoxy)]cyclohexane;
(*-*)-*trans*-[2-(4-morpholinyl)-1-(3-bromophenethoxy)]cyclohexane;
(*+*)-*trans*-[2-(4-morpholinyl)-1-(2-bromophenethoxy)]cyclohexane;
(*-*)-*trans*-[2-(4-morpholinyl)-1-(2-bromophenethoxy)]cyclohexane;
(*+*)-*trans*-[2-(4-morpholinyl)-1-(3-(3,4-dimethoxyphenyl)-1-propoxy)]cyclohexane;
(*-*)-*trans*-[2-(4-morpholinyl)-1-(3-(3,4-dimethoxyphenyl)-1-propoxy)]cyclohexane;
(1R,2R)/(1S,2S)-2-(4-morpholinyl)-1-(3,4-dichlorophenethoxy)cyclohexane;
(1R,2R)/(1S,2S)-2-(3-ketopyrrolidinyl)-1-(1-naphthenethoxy)cyclohexane;
(1R,2R)/(1S,2S)-2-(1-acetylpirazinyl)-1-(2-naphthenethoxy)cyclohexane;
(1R,2R)/(1S,2S)-2-(3-ketopyrrolidinyl)-1-(2,6-dichlorophenethoxy)cyclohexane;
(1R,2R)/(1S,2S)-2-[1,4-dioxa-7-azaspiro[4.4]non-7-yl]-1-(1-naphthenethoxy)cyclohexane;
(1R,2S)/(1S,2R)-2-(4-morpholinyl)-1-[(2-trifluoromethyl)phenethoxy]cyclohexane;
(1R,2R)/(1S,2S)-2-(3-ketopyrrolidinyl)-1-[3-(cyclohexyl)propoxy]cyclohexane;
(1R,2R)/(1S,2S)-2-(3-acetoxypyrrrolidinyl)-1-(1-naphthenethoxy)cyclohexane;
(1R,2R)/(1S,2S)-2-(3-hydroxypyrrrolidinyl)-1-(2,6-dichlorophenethoxy)cyclohexane;

(1R,2R)/(1S,2S)-2-(3-ketopyrrolidinyl)-1-(2,2-diphenylethoxy)cyclohexane;
(1R,2R)/(1S,2S)-2-(3-thiazolidinyl)-1-(2,6-dichlorophenethoxy)cyclohexane; and
(1R,2S)/(1S,2R)-2-(3-ketopyrrolidinyl)-1-(1-naphthenethoxy)cyclohexane; and
including isolated enantiomeric and diastereomeric isomers thereof, and mixtures thereof; and
pharmaceutically acceptable salts thereof.

170. (New) A composition comprising a compound according to any one of
claims 160-169 in combination with a pharmaceutically acceptable carrier, excipient or diluent.